

Patent Claims:

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1. Custom-moulded ear-plug device with at least one acousto-electric converter and/or at least one electro-acoustic converter, each with an acoustice input or, respectively, output, which input or output is connected via an acoustic conductor to a coupling port on the outer surface of the custom-moulded ear-plug shell, characterized in that the said acoustic conductor is in the form of a channel extending through, and bounded by, the material of the custom-moulded ear-plug shell.
 2. Custom-moulded ear-plug device as in claim 1, characterized in that, over its length, the channel features varying cross-sectional dimensions and/or shapes.
 3. Custom-moulded ear-plug device as in claim 1 or 2, characterized in that a matching stub line serving for the tuning of the acoustic transmission properties between the coupling port and the input or output extends into the said channel and is itself bounded by the material of the custom-moulded ear-plug shell.
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a2
 4. Custom-moulded ear-plug device as in one of the claims 1 to 3, characterized in that, over at least a substantial segment of its length, the channel extends essentially parallel to the outer surface of the custom-moulded ear-plug device.
 5. Custom-moulded ear-plug device as in one of the claims 1 to 4, characterized in that the custom-moulded ear-plug device is a hearing aid.
 6. Custom-moulded ear-plug device as in one of the claims 1 to 5, characterized in that the custom-moulded ear-plug device is an in-ear hearing aid and that the channel is part of a venting system for the ear drum.

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a2
7. Custom-moulded ear-plug device as in one of the claims 1 to 6, characterized in that at least certain segments of at least two of the signal-carrying channels extend in parallel fashion.